

Work Order ID 47983

June 26, 2009 12:37:27 PM



Page 1

Item ID: D3315-1

Accept



Setup Start



Revision ID: B

Item Name: Wearplate

Stop



Start Date: 15/07/2009 Start Qty: 2.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3315	Rev B								

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3315 ☐ Dwg Rev: ☐ Prog Rev: ☒ 2- ☒

Deburr if necessary

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

120

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

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Start Date: 15/07/2009 Start Qty: 2.00

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



Large Fab

Large Fab

Large Fab

Memo

Weld hard surface using D3315-1T3 as per QSI 004 and Dwg D3315 Rev:

☐ Qty Part Number Description Batch ☐ A/R
N/A 7560 Hardcoat Rod M109060

0.00

0.00

EL 9-9-28 X5

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

0.00

2) 507/02/30

(X5) 4

See P/b
on Box
of
old
w/o

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

2) 507/02/30

(+5) 4

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Page 4

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

Powdercoat

Memo

0.00

Powder Coating

START TIME:

145pm

OVEN TEMPERATURE:

2:50pm FINISH TIME:

320F

200

QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

210

Packaging

0.00

Packaging

Memo

0.00

Packaging

Identify on inside surface using a permanent fine point marker with the following: ☐TCCA-PDA, Dart Aerospace Ltd. ☐P/N: D3315-1, B/N: BXXXXX ☐For Product Eligibility see PDA04-17 ☐and Stock ☐Location: 496

Date: Tuesday, 19/05/2009 10:02:29 AM
 User: Melanie Fauteux

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: WEARPLATE
Job Number	: 47983		
Estimate Number	: 10741		
P.O. Number	:	Part Number	: D33151
This Issue	: 19/05/2009 S.O. No. :	Drawing Number	: D3315 REV. B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : SMALL /MED FAB	Drawing Revision	: B
Previous Run	: 36169	Material	:
Written By	:	Due Date	: 20/05/2009 Qty: 1 Um: Each
Checked & Approved By	: <u>MF 09-05-19</u>		
Comment	: Est: A 05.05.12 New issue KJ/JLM Est Rev:B As per Rev B 06-03-24 JLM Est Rev:C now water jet 07-12-06 DD		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	✓ M1010S16GA	1010/1025 sheet 16GA
-----	--------------	----------------------



Comment: Qty.: 1.7628 sf(s)/Unit Total : 3.5256 sf(s)

1010/1025/A21/6aA SHEET

batch 111410

18 9-5-19

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

1-Cut as per Dwg D3315

Dwg Rev: B

Prog Rev: B

18 9-5-19

(5)

2-Deburr if necessary

18 9-5-19

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



18 9-5-19

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

8 01/05/19 (5)

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1

Deburr if necessary

W/A S

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 19/05/2009 10:02:29 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 47983

Part Number: D33151

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

BRAKE NC

NC BRAKE



Comment: NC BRAKE

1- Form using DT8751 Die as per Dwg D3315 Rev: B

2- Form using DT8179 Die and form joggle using DT8157 as per Dwg D3315 Rev: B SB 09/05/20 (5)

7.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

S 09/05/20 (X5)

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld hard surface using D3315-1T3 as per QSI 004 and Dwg D3315 Rev: B

Qty Part Number Description Batch

A/R N/A 7560 Hardcoat Rod

M109813

EL 9-5-20 (15)

9.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 09/07/30 (5)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/09/30 (4)

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME: 1:45pm

OVEN TEMPERATURE: 320°C

FINISH TIME: 2:15pm

SB 09/10/01 (X5)

12.0

QC3



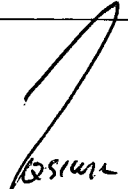
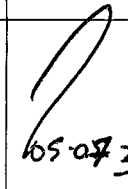
INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3315-1 PAR #: 09-035 Fault Category: Eng-drawing NCR: Yes ☒ No ☐ DQA: / Date: 09.10.13
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>47983</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-07-30	8.0	Add additional weld per discussion with Part is not per OEM, weld on wrong side. R.C. Eng design.		Add additional weld per discussion with David, Daniel Jensen. See PAR 09-035	EZ 9-10-1	 09/10/30		 09-07-30

NOTE: Date & initial all entries

Date: Tuesday, 19/05/2009 10:02:30 AM
User: Melanie Fauteux

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARPLATE

Job Number: 47983

Part Number: D33151

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0



PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify on inside surface using a permanent fine point marker with the following:

TCCA-PDA, Dart Aerospace Ltd.

P/N: D3315-1, B/N: BXXXXX

For Product Eligibility see PDA04-17

and Stock

Location: _____

14.0



QC21

FINAL INSPECTION/W/O RELEASE



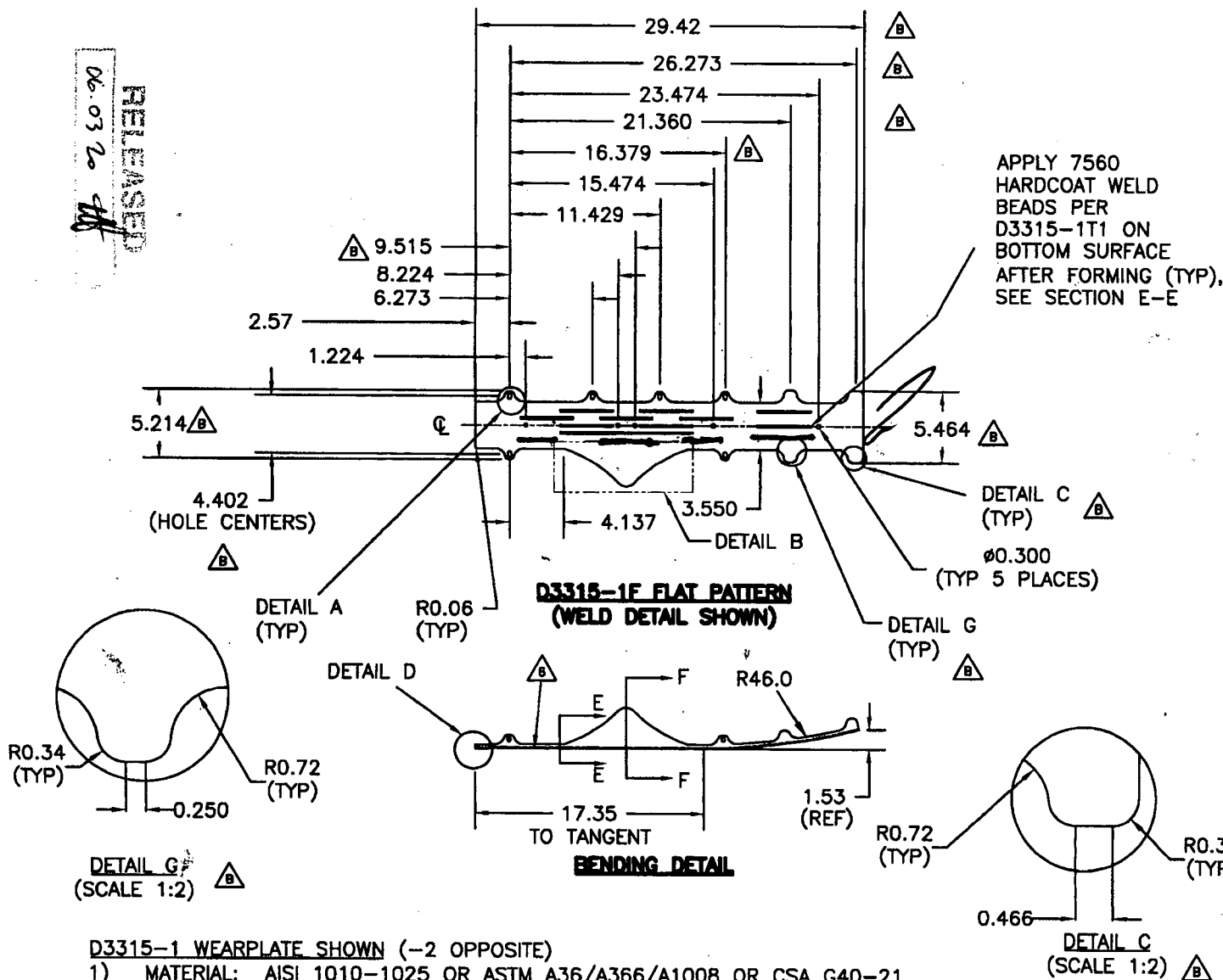
Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



DART

DESIGN	DRAWN BY	DART AEROSPACE LTD
04	04	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3315
DATE	TITLE	REV. B
06.01.31	WEARPLATE	SHEET 1 OF 4
A	04.09.10	NEW ISSUE
B	06.01.31	UPDATE DIMENSIONS



D3315-1 WEARPLATE SHOWN (-2 OPPOSITE)

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 16 GAUGE (0.060 THICK)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF.4.3.5.6) PER DART QSI 005 4.3
- 3) WELD PER DART QSI 004
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) IDENTIFY ON INSIDE SURFACE AS INDICATED
"TCCA-PDA, DART AEROSPACE LTD., P/N D3315-X
B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-17"

RELEASED
06.03.20

DART AEROSPACE LTD		Work Order: 47983
Description: WEAR PLATE		Part Number: D 3315-1
Inspection Dwg: D3315-1 Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒
First Article
☐
Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.266 X .450	+/- .010	.268 X .451	X			
Ø .300	+ .006 - .001	.303	X			
5.464	+/- .010	5.468	X			
3.550	+/- .010	3.558	X			
4.137	+/- .010	4.139	X			
4.402	+/- .010	4.402	X			
5.214	+/- .010	5.214	X			
1.224	+/- .010	1.226	X			
2.57	+/- .030	2.570	X			
6.273	+/- .010	6.272	X			
8.224	+/- .010	8.229	X			
9.515	+/- .010	9.519	X			
11.429	+/- .010	11.427	X			
15.474	+/- .010	15.472	X			
16.379	+/- .010	16.375	X			
21.360	+/- .010	21.363	X			
23.474	+/- .010	23.478	X			
26.273	+/- .010	26.273	X			
29.42	+/- .030	29.42	X			
.063	+/- .010	.061	X			
2.831	+/- .010	2.833	X			
9.466	+/- .010	9.463	X			

Measured by: IB
Date: 9-5-19

Audited by: S
Date: 09/05/19

Prototype Approval: A
Date: h

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

Jason Murdoch

From: David Shepherd [dshepherd@dartaero.com]
Sent: July 30, 2009 1:40 PM
To: 'Jason Murdoch'
Cc: 'Mike Petsche'
Subject: RE: Weld on the D3315-1 wearplate

Jason,

Sorry for not getting back to you on this. From our previous discussions, I agree with you that it would be a product improvement to add the additional weld bead that you are talking about.

David

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]
Sent: Thursday, July 30, 2009 6:34 AM
To: 'David Shepherd'
Subject: FW: Weld on the D3315-1 wearplate

Hi David,
Is it worth while to revise the drawing for the weld pattern? If so I will raise a PAR. I have never heard of a complaint regarding these parts.
At the very least, for the amount we make, I would like to just add an additional weld down the inside of the wearplates in WIP....
I cannot find the original request I sent you.
Thanks

Jason Murdoch
Quality Coordinator
jmurdoch@dartaero.com

From: Dan Stow [mailto:dstow@dartaero.com]
Sent: May 27, 2009 11:52 AM
To: 'Jason Murdoch'; 'Mike Petsche'
Cc: 'David Shepherd'; 'Peter Hum'; 'Bill Beckett'; 'L Lacelle'; 'Melanie Fauteux '; 'Susane Sheldon'; 'Dale Trepanier'
Subject: RE: Weld on the D3315-1 wearplate

1- me neither

Dan Stow
Technical Support
Dart Aerospace Ltd.
dstow@dartaero.com
Tel: 613.632.5200
Cell: 613.676.0992

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]
Sent: May 27, 2009 11:42 AM
To: 'Mike Petsche'
Cc: 'David Shepherd'; 'Peter Hum'; 'Bill Beckett'; 'Dan Stow'; 'L Lacelle'; 'Melanie Fauteux '; 'Susane Sheldon';

04/09/2009

'Dale Trepanier'

Subject: RE: Weld on the D3315-1 wearplate

A 1- Not that I'm aware of.

A 2- Yes

Jason Murdoch

Qc. Coordinator

jmurdoch@dartaero.com

From: Mike Petsche [mailto:mpetsche@dartaero.com]

Sent: May 27, 2009 11:32 AM

To: 'Jason Murdoch'

Cc: 'David Shepherd'; 'Peter Hum'; 'Bill Beckett'; 'Dan Stow'; 'L Lacelle'; 'Melanie Fauteux '; 'Susane Sheldon'; 'Dale Trepanier'

Subject: RE: Weld on the D3315-1 wearplate

AT the risk of sounding lazy, has anyone every complained about this? Have they been in the field like this since 2004?

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]

Sent: Wednesday, May 27, 2009 11:18 AM

To: 'Mike Petsche'

Cc: 'David Shepherd'; 'Peter Hum'; 'Bill Beckett'; 'Dan Stow'; 'L Lacelle'; 'Melanie Fauteux '; 'Susane Sheldon'; 'Dale Trepanier'

Subject: Weld on the D3315-1 wearplate

Good day,

Please see the attached photo's for the welds. The welds are as per the drawing (unless I am misinterpreting the view), but I think the welds should be on the opposite side, since the wearplate gets angled that way.

Please let me know what you think, and I'll raise the action accordingly. The parts are in quarantine until further notice, since the OEM's are on the opposite side.

As a corrective action, if necessary, a deviation for an additional weld on the inside would be sufficed.

Thanks,

Jason Murdoch

Qc. Coordinator

jmurdoch@dartaero.com

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.339 / Virus Database: 270.12.40/2135 - Release Date: 05/27/09 07:50:00

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.392 / Virus Database: 270.13.35/2271 - Release Date: 07/29/09 18:07:00

04/09/2009